

**■ NTL BREAKS SPEED BARRIER**

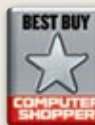
NTL has become the first UK ISP to break the 8Mbit/s barrier by offering 10Mbit/s as its standard broadband speed. All the cable operator's 1.5 million customers will be offered a free upgrade with no additional monthly fee, beginning with its current 3Mbit/s subscribers. Users can choose a usage allowance, priced accordingly, to match their requirements, with a tool provided to monitor usage. An uncapped option will be also be available.

The first upgrades will take place before the end of the year. As a bonus, 3Mbit/s subscribers will also have their usage limit raised from 30GB to 75GB per month. All upgrades will be completed by the end of 2006, by which time NTL may have begun the process of merging with the UK's other cable operator, Telewest. For more information, see www.telewest.co.uk.

■ HIGH-POWER WIRELESS

Buffalo has announced its High Power Wireless Cable/DSL Smart Router to accompany the high-powered PC Card adaptor, reviewed opposite. The router has an amplifier, which means that it can transmit a stronger wireless signal. The idea is that it can transmit through thick walls that usually thwart other routers.

We'll bring you a full review soon, but in the meantime you can find more information at www.buffalotech.co.uk.

**HOTLIST NETWORK ATTACHED STORAGE****BUFFALO Terastation 1TB**

RATING ★★★★★

PRICE £598 inc VAT

SUPPLIER www.dabs.comDETAILS www.morecomputers.co.uk

If your hard disk is already full of digital photographs and music files, Buffalo's 1TB Terastation is the perfect answer, providing an excellent way to boost storage on a network. This device has four 250GB hard disks. You can also use RAID to protect your valuable data. The system is very easy to set up, and considering the price of the individual components it's great value.



SPECIFICATIONS 1TB storage (four 250GB hard disks), Gigabit Ethernet, four USB2 ports. **Part code** HD-H1.0TGLR5

REVIEW ADSL ROUTER**HERCULES Wireless ADSL Router**

RATING ★★★★★

PRICE £85 inc VAT (£25 inc VAT for PC Card)

SUPPLIER www.amazon.co.ukDETAILS www.hercules.com

Hercules's Wireless ADSL Router's over-large casing makes it look like an expensive bit of designer hi-fi gear. While the large size may be a bit over the top, however, it's one of the easiest products to configure that we've seen.

Rather than the usual web-based configuration utility, Hercules provides its router with a dedicated Windows configuration application. The first steps guide you pictorially through the process of connecting it to your ADSL connection.

Next, the configuration assistant helps you configure your internet and wireless settings. The wireless settings are excellent, and let you change the name of the network and the security settings. Security is classified as Weak (64-bit WEP), Medium (128-bit WEP) and High (WPA-PSK), so you won't feel thrown in at the deep end. Unfortunately there's no way to generate WEP keys automatically, so you're left to tackle that one yourself.

Apart from this, the router is surprisingly friendly. Hercules turns on the firewall by default and, unless you have problems getting internet applications working, you shouldn't have to change any other settings. Once configured, you can use the web-based management system to alter any of



your settings without having to resort to the original configuration utility.

The router only supports standard 54Mbit/s 802.11g traffic and has no turbo mode. There's no PC Card network adaptor in the box, so we tested using the separately available adaptor. At close range it managed 12.61Mbit/s, and at 10m through a wall it achieved 10.75Mbit/s. This is similar to Zyxel's router (below), which has a turbo mode.

The Wireless ADSL Router is expensive, but its simplistic installation and configuration make it an attractive choice for network novices.

David Ludlow

✓ Easy to set up

✗ Large; fairly expensive

SPECIFICATIONS 802.11g wireless router (54Mbit/s), four-port Ethernet switch, ADSL modem. **Part code** HWAR-0604

REVIEW ADSL ROUTER**ZYXEL Prestige 660W**

RATING ★★★★★

PRICE £73 inc VAT

SUPPLIER www.dsl-warehouse.co.ukDETAILS www.zyxel.co.uk

Zyxel's Prestige 660W ADSL 2 router is one of the ugliest routers on the market. Its cheap-looking plastic exterior is box-like and unappealing. Things don't get better when you try to configure it, either.

The web interface has a Wizard setup mode, but it's far from friendly. There is a confusing range of options including Encapsulation and Multiplex. The quick-start guide doesn't help to explain them. While the default settings work for the UK, we'd have preferred more help. However, the diagnostic page at the end of configuration, which tests your ADSL and internet connection, is a quick and useful way to verify settings. Strangely, the setup wizard doesn't cover wireless settings. If you don't change them through the basic-looking Advanced setup web pages, you're left with an insecure router.

The wireless settings are like those on other routers and are fairly easy to configure. The router automatically generates a WEP key (up to 256-bit encryption is supported), but there's no support for the newer WPA-PSK. There's Universal Plug and Play (UPnP) and a firewall, which is hard to configure properly. The Prestige 660W also has a 125Mbit/s



turbo mode; Zyxel provides a partner PC Card adaptor in the box, which we used to test performance. At close range it achieved 18.64Mbit/s; moving 10m and one wall away resulted in 10.62Mbit/s. These are average scores for a wireless network and not as good as the US Robotics MaxG, opposite.

It's good that Zyxel includes a network adaptor as part of this bundle, but the Prestige 660W is hard to recommend. The management tool is confusing, and the router doesn't support WPA-PSK.

David Ludlow

✓ Fast transfer rates

✗ No WPA support; difficult to configure

SPECIFICATIONS 802.11g wireless router (125Mbit/s turbo mode), four-port Ethernet switch, ADSL 2 modem, includes CardBus WiFi adaptor. **Part code** P660HWG162B



REVIEW WIRELESS ROUTER

US ROBOTICS Wireless MaxG Router

RATING ★★★★★

PRICE £77 inc VAT

SUPPLIER www.misco.co.ukDETAILS www.usr.com

The MIMO routers we've seen provide a way of extending wireless range and transmission speeds. However, none of those routers conforms to a known standard. US Robotics' aim with the Wireless MaxG Router is to get similar results but within the confines of the 802.11g specification. The company claims that you'll enjoy the benefit of the router with any wireless adaptor. However, as it has a 125Mbit/s turbo mode, you'll get the best performance when you use a MaxG adaptor.

We used a PC Card adaptor. The router achieved an incredible 26.21Mbit/s at close range. Moving 10m away we recorded an equally impressive 24.67Mbit/s. We still had a connection more than 20m away and through three walls, but the transfer rate was slow. Testing using a Centrino notebook also yielded terrific results. At close range it achieved 14.98Mbit/s and at 10m it achieved 19.07Mbit/s. The connection was unstable at 20m.

Performance isn't the only thing that US Robotics has been working on. Usability has come on in leaps and bounds. It's managed through a web browser; the first time you connect, it starts the configuration wizard. There's lots of onscreen help, and by the end of it you've configured your internet access and network name and turned on security. There's support for WEP and WPA-PSK, so you can choose the security to match your PC's capabilities. The firewall also comes turned on by default.

Once you've finished with the wizard, there's little need to change any other settings. However, should you want to configure some advanced settings, such as port forwarding to get an internet application working properly, you'll find the interface clean and easy to use. It's well laid out, and we had no trouble tracking down options.

The MaxG Router is excellent value and, as it complies with the 802.11g standard, you get the throughput benefits on all devices. It really deserves our Best Buy award.

David Ludlow



Fast; works with all WiFi devices



Becomes very slow at long range

SPECIFICATIONS 802.11g (125Mbit/s turbo mode), four network ports, one WAN port. **Part code** USR5461

REVIEW WIRELESS ANTENNAS

HAWKING TECHNOLOGY Omni-Directional 7dBi Antenna

RATING ★★★★★

PRICE £31 inc VAT

SUPPLIER www.savastore.comDETAILS www.hawkingeurope.com

Direction 7dBi Antenna

RATING ★★★

PRICE £33 inc VAT

SUPPLIER www.savastore.comDETAILS www.hawkingeurope.com

Wireless signals are often blocked by thick walls or interference. There are several ways to improve the situation, such as Hawking's Hi-Gain 7dBi antennas.

Standard wireless devices come with 2dBi antennas, so these external ones are a lot more powerful. We have reviewed the omni-directional and directional models here. They can both connect to routers or desktop cards that use RP-SMA or RP-TNC connectors (large screw-in connectors). In most cases, if your router or wireless PCI card has antennas you can unscrew, you can use either of these products.

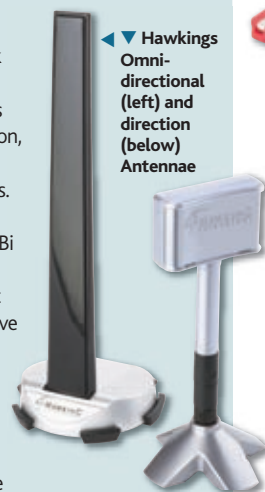
We tested them on a 54Mbit/s wireless router and used an Intel Centrino notebook to test network speeds. Without either aerial, we recorded throughputs of 11.97Mbit/s at close range and 8.07Mbit/s at 10m through a wall.

The omni-directional antenna is designed to increase network coverage in a 360° arc. At close range, where it makes the least difference, it achieved 13.32Mbit/s; at 10m, 8.74Mbit/s. But it managed 8.22Mbit/s at 20m, where previously we couldn't get a signal. For homes where the wireless signal gets weaker in certain parts of the house, this could make all the difference.

The directional antenna is designed to increase wireless signal quality in one direction (an 80° arc), which is useful if you've got a single device that needs a better quality signal. You should install these devices in pairs. At close range, we recorded 13.32Mbit/s and at 10m we achieved 11.81Mbit/s. However, we couldn't get a signal at 20m using a single antenna.

The directional antenna is good value if you require one, while the omni-directional antenna is a cheap way to increase a wireless LAN's range.

David Ludlow



▼ Hawking's
Omni-
directional
(left) and
directional
(below)
Antennae

SPECIFICATIONS Omni-directional antenna, 7dBi. **Part code** HA17SIP. Directional wireless antenna, 7dBi. **Part code** HA17MD

REVIEW WIRELESS ADAPTOR

BUFFALO High Power Wireless CardBus Adapter

RATING ★★★★★

PRICE £43 inc VAT

SUPPLIER www.dabs.comDETAILS www.buffalotech.co.uk

We have reviewed plenty of examples of ways to extend your wireless network's range this month, but what about the client side? There are going to be times where a better quality network adaptor makes a lot of sense. For example, if you're a big user of wireless hotspots, then being able to get a stronger signal from further away is advantageous.

With this in mind, Buffalo has created its High Power Wireless CardBus Adapter. Rather than use lots of clever techniques for improving signal strength and speed, it uses good old brute force power.

The card comes installed with an amplifier that boosts the signal and lets you punch through obstacles. It also has an external aerial connector, although using both is illegal in this country, as it exceeds power limitations.

You shouldn't have to worry about boosting power further, though. We tested it in our labs using our standard tests. At close range, using the same router we used to test Hawking's antennas (left), it achieved a massive 14.72Mbit/s. Moving 10m away produced an even better 15.53Mbit/s. We also managed to get a signal 20m away with a transfer rate of 6.08Mbit/s. Considering that this was connecting to a plain router using a standard 2dBi antenna, it was very impressive.

The High Power Wireless CardBus Adapter has a 125Mbit/s turbo mode for use with Buffalo routers. The bundled client software can use Buffalo's AOSS, so you can flash over network and security settings at the touch of a button.

If you have a notebook that needs a little bit of extra range, or you are a heavy user of hotspots, this is an excellent wireless adaptor, though it is a little expensive.

David Ludlow



Provides a better signal on a notebook; increases throughput



A little expensive

SPECIFICATIONS 802.11g (125Mbit/s turbo mode), CardBus adaptor, high power. **Part code** WLI-CB-G54HP